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# From the epipelagic zone to the abyss: Trophic structure at two seamounts in the subtropical and tropical Eastern Atlantic - Part II Benthopelagic fishes

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## ABSTRACT

Specific mechanisms, driving trophic interactions between seamount associated fishes and the pelagic community may be highly variable in different seamount systems. This study investigated the trophic structure and the main prey of benthopelagic fishes from the summit and slope regions of Ampère and Senghor, two shallow seamounts in the subtropical and tropical NE Atlantic, and the adjacent deep-sea plains. For the identification of food sources and nutritional links to the pelagic realm a combination of stomach content and stable isotope ratio ( $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$ ) analyses was used.  $\delta^{13}\text{C}$  ranged from -22.2 ‰ to -15.4 ‰ and  $\delta^{15}\text{N}$  covered a total range of 8.0-15.9 ‰. Feeding types of fish species comprised mainly zooplanktivores and mixed feeders, but also benthivores, piscivores, and predator-scavengers. Based on epipelagic particulate organic matter, they occupied trophic positions between the 2<sup>nd</sup> and 4<sup>th</sup> trophic level. Differences in stomach contents and stable isotope signatures indicate a resource partitioning among the benthopelagic fish fauna through distinct habitat choice, vertical feeding positions and prey selection. Topographic trapping of vertically migrating zooplankton on the summit seemed to be of minor importance for food supply of the resident near-bottom fishes, rather horizontal current-driven advection of the planktonic prey was assumed as major factor. Vertically migrating micronekton and mesopelagic fishes show up as key players within the food webs at Ampère and Senghor Seamounts and the adjacent deep-sea plains.

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